

CERTIFICATE OF QUALITY

Client(s):	Refineria Panamá, S. de R.L.	Sample Identification	Shore Tank D-2103
Address	Bahia Las Minas, Colón Tel: 433-8100, Fax: 433-8129	Product	LOW SULFUR DIESEL Oil
Date of Reception Sample	julio 27, 2014	Terminal	Refineria Panamá
Date of Analysis	julio 27, 2014	Representative Sample	Composite(U,M,L)
Drawn By	OTILATAM DE PANAMA, S.A.	Insp. OTI	PT-14-0431
Volumen Disponible	157,042.94 BBLS	Lab OTI	LP-465-14
Volumen Total	172,204.94 BBLS	Lote	0714LDO048

TESTS PERFORMED

Description of Test	Source Sample	Units	Method	Results	DIESEL LIVIANO 2D	
					Minimum	Maximum
Color, ASTM Scale	Composite	-----	ASTM D 1500 - 04a	<0.5	-----	2.5
Appearance		-----	ASTM D 4176 (Procedure 1)	Pass	-----	Report
Water by Distillation + Sedimento		% vol. + %wt	ASTM D 95 + ASTM D 473	0 + 0	-----	0.05
A.P.I. Gravity		° API	ASTM D 287	37.4	32.0	-----
Flash Point, P.M.C.C		°C (°F)	ASTM D 93 A	60 (140)	60 (140)	-----
Sulfur Content		mass %	ASTM D 4294	0.0290	-----	0.05
Ash Content		mass %	ASTM D 482	<0.001	-----	0.01
Carbon Residue, 10% Bottoms		mass %	ASTM D 4530	0.02	-----	0.30
Corrosion, copper strip , 3 h at 50°C		-----	ASTM D 130	1a	-----	2.0
Viscosity Kinematic at 40°C		cSt	ASTM D 445	2.583	1.9	4.1
Cetane Index, Calculated		-----	ASTM D 976	50.6	45	-----
Distillation Temperature, PI		°C (°F)	ASTM D 86	164 (327)	-----	Report
10%		°C (°F)	ASTM D 86	204 (399)	-----	Report
50%		°C (°F)	ASTM D 86	264 (507)	-----	288 (550)
90%		°C (°F)	ASTM D 86	320 (608)	282 (540)	338 (640)
PF		°C (°F)	ASTM D 86	347 (657)	-----	Report
Residue , %Vol.		% Vol.	ASTM D 86	0.8	-----	2.0
Loss, %Vol.		% Vol.	ASTM D 86	0.2	-----	2.0
(*) Lubricity		Micron	ASTM D 6079 Å	422	-----	520

Note:

Results marked as (*) are submitted as reported by a third Laboratory: Inspectorate Panama, S.A.

Å These methods are not accredited by CNA of Panama.

The results of the test indicated on this report are only valid for the indicated sample.

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Luis Chong

For OTILATAM DE PANAMA,S.A.



INSPECTORATE

Certificate of Analysis

LE No. 003

Vessel / Shore Tank : Tk-2173 (Final del TORM GERTRUD)
Product : Diesel Oil
Client Reference : Basilio Calogianis
Terminal / Port / Office : Refinería Panamá
Job ID : LCO-1400014
Sample Details : Tk-2173 (Final M/T TORM GERTRUD)
Comments : Lote: 0814LDO052 **Volumen Total:** 124,498.11 bbls **Volumen Disponible:** 113,248.11 bbls

Sample Submitted By : Refinería Panamá
Analysis Performed By : Inspectorate Colón, Panamá Laboratory
Date Sampled : 05-Aug-2014
Date Reported : 06-Aug-2014
Submission ID : LCO-1400014

Method	Test	Tk-2173	
		LCO-1400014-01-001	
Method	Test	Result	Specification
ASTM D1500	ASTM Color	L1.0	2.5 Max.
ASTM D4176 Proc. 1	Pass / Fail	Pass	Pass
	Visual Observance	C and B	
	Vortex Observance	No P and W	
ASTM D2709	Water and Sediment , % (v/v)	<0.01	0.05 Max.
ASTM D4052	API Gravity @ 60°F	37.2	32.0 Min.
ASTM D93 Proc. A	Manual / Automated	Automatic	
	Flash Point , ° C / ° F	64.0 / 147	60 ° C Min.
ASTM D4294	Sulfur Content , mass %	0.0100	0.05 Max.
ASTM D482	Ash Content , mass %	<0.001	0.01 Max.
ASTM D4530	Carbon Residue, 10% Btm , % (m/m)	<0.01	0.30 Max.
ASTM D130	Copper Corrosion at 50°C (122°F) for 3h	1a	1a
ASTM D445	Test Temperature	40°C (104°F)	
	Kinematic Viscosity , cSt	2.491	1.9 - 4.1
ASTM D976	Calculated Cetane Index	49.5	45 Min.
ASTM D86	10% Recovered , ° C	203.0	
	50% Recovered , ° C	261.0	288 Max.
	90% Recovered , ° C	324.0	282 - 388
	Final Boiling Point , ° C	348.0	
	Residue , %	1.2	2.0 Max.
	Loss , %	0.5	2.0 Max.
ASTM D6079	Lubricity, Wear Scar Diameter , um	510	520 Max.
ASTM D2161	SFS, 100F	34.3	
ASTM D4868	Gross Heat of Combustion , BTU/lb	19,778	
	Net Heat of Combustion , BTU/lb	18,558	
	Gross Heat of Combustion , BTU/gal	138,138	
	Net Heat of Combustion , BTU/gal	129,618	
ASTM D3605	Sodium , ppm (mg/L)	<0.10	1.0 Max.
	Vanadium , ppm (mg/L)	<0.10	0.5 Max.
ASTM D4740	Compatibility Rating	1	2.0 Max.
ASTM D2276	Particulate Contamination , ppm (mg/L)	0.40	4.0 Max.

For Inspectorate:

Rutilo Espinosa, Lab Manager

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